UI Bulletin #182

Subject:	Vehicle Speed Signal
Models Years Affected:	2021
Models Affected:	Silverado HD 4500/5500/6500 Models
Origination Date:	October 6, 2021
Revision Date:	N/A

ADVISORY:

Condition/Concern:

Some customers/upfitters may indicate that the Vehicle Speed Signal (VSS) at cavity 19 of the X7 connector in the IP junction block, is no longer working or has changed from previous model years. This causing the equipment installed to not operate as it had on previous model year builds. This condition is due in the 2021 model year where the VSS now being provided by the Electronic Brake Control Module (EBCM) and not the Transmission control module (TCM). Both control module provides the signal at the same frequency (4k/PPM) but in different manners. The TCM provide a V+ pulse and the EBCM a V- pulse of which can be used as input to the added equipment.

Repair/Recommendation:

If the added equipment requires a V+ pulse to operate you can use the signal as it is provided, however you will need to add a current limited V+ circuit which is pulled low by the EBCM and release back to the V+ state. The release of the V+ signal appears to the added equipment as pulsed + signal. For use of this signal please refer to Figure 1 below for mechanization instructions.

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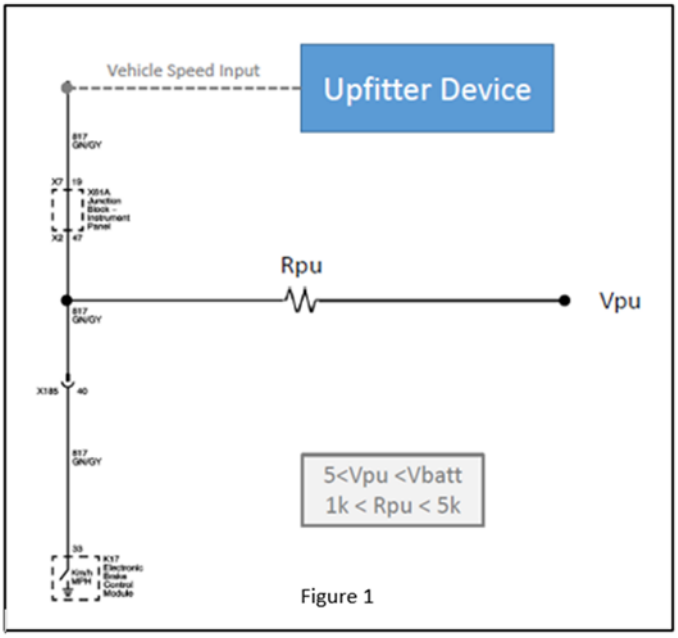

Figure 1

If the VSS as provided and the use of V+ mechanization shown in Figure 1 is not a viable option to obtain a V+ pulse required by the added equipment then the vehicle may be rewired as outline in the steps below to obtain the VSS from the TCM as was provided in previous model years.

1. Locate and disconnect the 40 way X138 connector (item 1) as shown below in figure 2

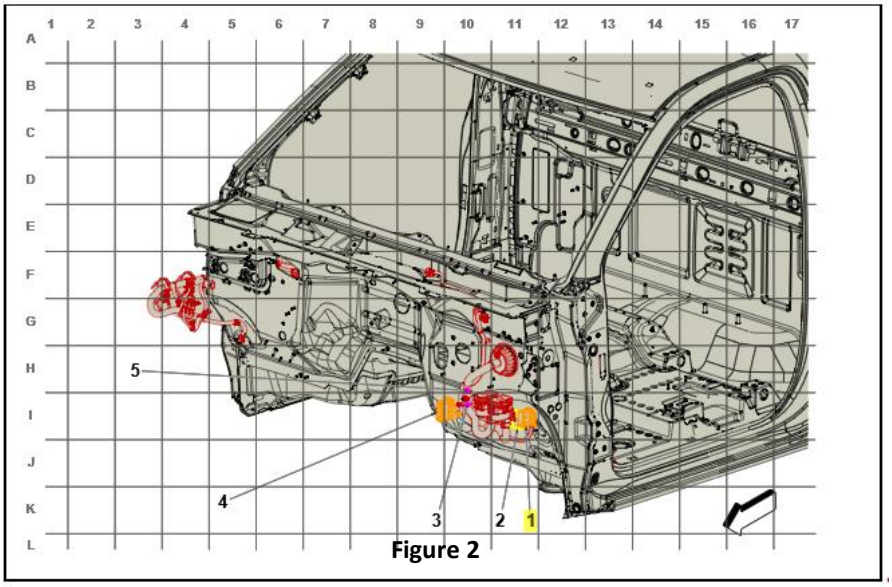

Figure 2

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2. Locate the red wire in cavity 40 of the chassis side of the X138 connector, measuring approximately 6-8 inches back from the X138 connector (removing harness wrapping as needed) cut the red wire, leaving a 6-8 inch pigtail coming the connector. Seal the chassis harness blunt cut end using shrink wrap extended past the cut end, then by heating and pinching off the shrink wrap extension (as shown below in Figure 3)

Figure 3

3. Obtain approximately 10 feet of .75mm^2 sized wire (preferably a green (w/gray if possible)) to the red pigtail from cavity 40 of the chassis side of the X138 connector.
4. Safely route and secure the wire to the TCM/connector located as shown in figure 4

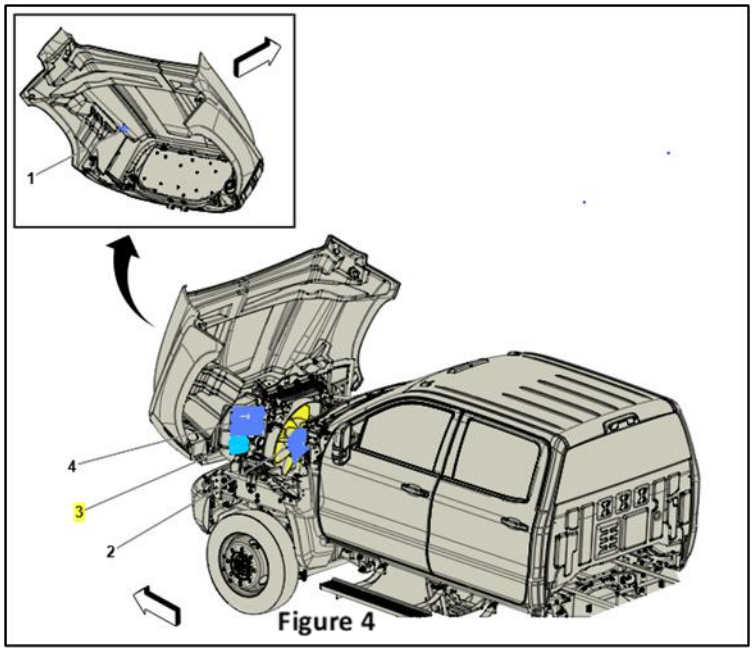

Figure 4

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5. Remove the connector from the TCM…Locate the unused/molded over cavity 25.

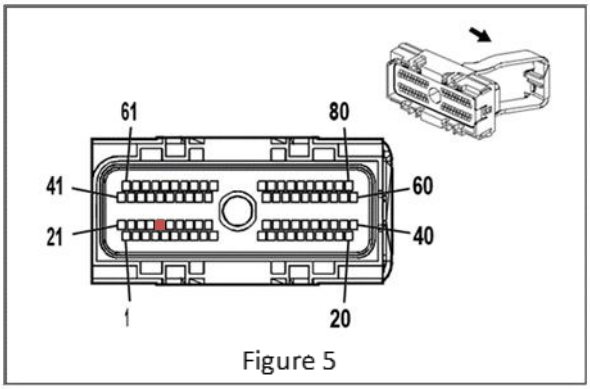
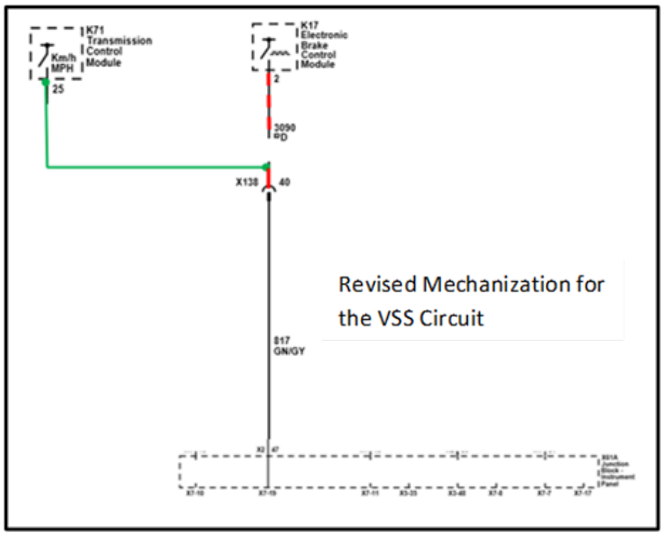


Figure 5

6. The molded over cavity can be easily opened using a small sharp wire pick.
7. Once the over-mold material has been removed, install terminated wire lead P/N13578813 (available from any GM dealer parts department).
8. Cut to length the added green wire to match the location of the terminated lead
9. Slide a section of shrink tube over the green wire and back away from the soon to be soldered wire ends.
10. Using rosin core solder – solder the new green wire to the terminated wire lead add to cavity 25 of the TCM connector. Seal the soldered joint with the heat shrink tube.
11. Returning now the blunt cut red wire at the X138… add a section of heat shrink tube over the added green wire, strip and solder the red wire pigtail to the added green wire.
12. Confirm again that the added green wire is secured and safely away from any heat sources and/or moving components
13. Reconnect the connectors and test upfit device for proper operation.
14. When complete the revised mechanization should reflect the schematic in Figure 6



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Additional Information:

This modification is not a warrantable event this a change to the vehicle from it's as built status and for the sole purposes to adapt it to meet the upfit being added to the chassis.

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